



Applicants respectfully traverse and request reconsideration in view of the following remarks.

As previously mentioned, claim 1 recites, inter alia, “maintaining the reaction mixture at a constant  $\text{OH}^-$  concentration”. However, Uedaira, at col. 3, line 66 to col. 4, line 26, only teaches that the hydrolyzation product of titanium Ti compound is reacted with a water-soluble metal salt in a strong alkaline aqueous solution or suspension having a pH of higher than 13.0, preferably 13.5 or above. Uedaira fails to teach that such a pH value should be maintained constant during the reaction. That is to say, Uedaira fails to teach an essential technical feature recited in the pending claim 1: “maintaining the reaction mixture at a constant  $\text{OH}^-$  concentration”. As known to those of skill in the art, the pH value will decrease in Uedaira as the reaction proceeds. As explained in a prior response, when the reaction is performed in a multi-step process (as in Uedaira and Hadara), the concentration of  $\text{OH}^-$  steadily decreases during the course of the reaction. There is no rationale contained in Uedaira to maintain the  $\text{OH}^-$  levels as a constant during the course of the reaction. Given the substantial drop in  $\text{OH}^-$  levels during the course of the reaction, as taught by Uedaira, Applicants assert that Uedaira teaches away from maintaining the  $\text{OH}^-$  levels as a constant concentration over the course of the reaction.

In addition, Applicants assert that the burden of showing a constant  $\text{OH}^-$  concentration in Uedaira falls upon the Examiner. The pH of the reaction solution disclosed by Uedaira would fall as the reaction proceeded, and it is not clear where in Uedaira the Examiner finds teachings of a constant pH over the course of the reaction.

Importantly, the present invention requires maintenance of a constant pH while the reaction occurs. It would not have been obvious to one of ordinary skill in the art to use the teachings of Uedaira to appreciate the unexpected results achieved by maintaining a constant pH during the reaction.

In addition, Uedaira teaches a method of manufacturing metal titanate fine powder ( $\text{MTiO}_3$ ) in a two-step process: (1) preparing hydrolyzed compound of titanium compound, and (2) reacting said hydrolyzed compound of titanium compound with water soluble metal salt of Ba, Sr or Ca in an aqueous alkaline solution having pH not less than 13 (col. 2, lines 21-31) and the reaction will take a few hours (Examples of Uedaira, beginning at col. 6). As mentioned in the previous response, however, the reaction according to the present invention, and as claimed in claim 1, is carried out in accordance with the principle of a one-step process and macroscopically, the aqueous solution of titanium and barium is reacted with an excess of  $\text{OH}^-$  in one step (which is instantaneous and rapid) to obtain barium titanate powders as described in the present invention.

The novel present invention requires a one-step process to prepare barium titanate powders. Nowhere does Uedaira teach a simultaneous reaction performed at a constant pH, or provide a rationale to perform the reaction in one-step at a constant pH. It would not have been obvious for one of ordinary skill in the art to arrive at the present invention upon the teachings of Uedaira.

The Examiner also asserts that Woditsch teaches a process for making alkaline earth titanates by precipitating hydroxides at a constant pH value. Woditsch teaches that only by precipitating the hydroxides at a constant pH value, it is possible to obtain commercially

processable, reactive hydroxides from zinc and alkaline earth metal hydroxides and  $\text{TiO}_2$ -hydrolyzate sludges, which is then calcined at high temperatures to form the corresponding alkaline earth metal titanates. (Col. 2, lines 33-39) According to Woditsch, the purpose of maintaining a substantially constant pH value is to obtain readily filterable and washable precipitates, which can be calcined at high temperatures to form titanates (col. 2, lines 2-11), and the production of zinc or alkaline earth metal titanates involves two steps: (1) precipitating zinc or alkaline earth metal hydroxides in the presence of finely divided titanium dioxide to obtain reactive hydroxides, and then (2) calcination (col. 1, lines 49-54).

To the contrary, the reaction according to the present invention is carried out in accordance with the principle of one-step process and macroscopically, the aqueous solution of titanium and barium is reacted with an excess of  $\text{OH}^-$  in one step to obtain barium titanate powders as described in the present invention.

In view of the above, a person skilled in the art would not conceive the technical solution of the present invention by simply combining the reaction of Uedaira with the teachings of Vita and the Higee reactor of Guo. Neither would a person of skill in the art simply combine the reaction of Harada with the teachings of Vita and the Higee reactor of Guo and the reaction of Uedaira or Woditsch

Based on the above reasons, Applicants request that the obviousness rejections be withdrawn.

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**CONCLUSION**

In view of the foregoing remarks, Applicants believe the pending application is in condition for allowance, and earnestly solicit same.

If fees in addition to those transmitted herewith should be required for the filing of this response, the Commissioner is hereby authorized and requested to charge any such fees to Darby and Darby Deposit Account No. 04-0100.

Dated: August 19, 2008

Respectfully submitted,

By  44528  
Louis J. DelJuidice for  
Registration No.: 47,522  
DARBY & DARBY P.C.  
P.O. Box 770  
Church Street Station  
New York, New York 10008-0770  
(212) 527-7700  
(212) 527-7701 (Fax)  
Attorneys/Agents For Applicant